

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

As a below-named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name. I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **METHOD AND APPARATUS FOR MODELING USING A HARDWARE-SOFTWARE CO-VERIFICATION ENVIRONMENT**. The specification of which was filed August 11, 2000 as U.S. Patent Application Number 09/637,984. I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)

Priority Claim

Yes No

--	--

Number

Country

Day/Month/Year Filed

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.

Filing Date

Status: Patented, Pending, Abandoned

I hereby claim the benefit under Title 35, United States Code, § 119(e) of any United States provisional application(s) listed below:

60/148,822

August 13, 1999

Application Serial No.

Filing Date

I hereby appoint the following as my attorneys with full power of substitution to prosecute this application and transact all business in the Patent and Trademark Office in connection therewith:

Thomas B. Haverstock

32,571

Jonathan O. Owens

37,902

Please direct all correspondence regarding this application to the following:

Thomas B. Haverstock
HAVERSTOCK & OWENS LLP
260 Sheridan Avenue, Suite 420
Palo Alto, California 94306

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First Joint Inventor: Bruce Harmon

Inventor's Signature: Bruce Harmon

11/20/00

Date

Residence: 12161 NW Welsh Drive, Portland, OR 97229

Citizenship: United States

Post Office Address: 12161 NW Welsh Drive, Portland, OR 97229

Full Name of Second Joint Inventor: Michael Butts

Inventor's Signature: _____

Date

Residence: 2734 NE 49th Avenue, Portland, OR 97213

Citizenship: United States

Post Office Address: 2734 NE 49th Avenue, Portland, OR 97213

RECEIVED

MAR 26 2001

OFFICE OF PETITIONS

ASSIGNMENT

WHEREAS, WE, Bruce Harmon, Michael Butts and Gordon Battaile, hereinafter referred to as "ASSIGNORS", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: METHOD AND APPARATUS FOR MODELING USING A HARDWARE-SOFTWARE CO-VERIFICATION ENVIRONMENT

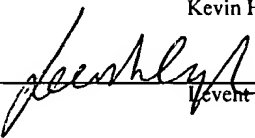
Date of execution of application: _____ Filing Date: August 11, 2000 Serial No.: 09/637,984

WHEREAS, Synopsys, Inc., a corporation of the State of Delaware, 700 East Middlefield Road, Mountain View, CA 94043, hereinafter referred to as "ASSIGNEE", is desirous of acquiring the entire right, title and interest in said invention and application and in any Letters Patent which may be granted on the same;

NOW THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee, and Assignee's successors and assigns, all right, title and interest in and to said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignors had this assignment and transfer not been made, to the full end and term of any Letters Patent.

Assignors further agree that they will, without charge to said Assignee, but at Assignee's expense, cooperate with Assignee in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as Assignee lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said Assignee, or Assignee's successors and assigns.

IN TESTIMONY WHEREOF, Assignors have hereunto signed their names to this assignment on the dates indicated below.

_____ Bruce Harmon	_____ Date
_____ Michael Butts	_____ Date
_____ Gordon Battaile	_____ Date
_____ Kevin Heilman	_____ Date
 _____ Levent Caglar	<u>11/11/2001</u> _____ Date
_____ Raju Marchala	_____ Date
_____ Larry Carner	_____ Date
_____ Kamal Varma	_____ Date

STATE OF _____

COUNTY OF _____

On _____ before me, _____,
personally appeared Bruce Harmon, Michael Butts, and Gordon Battaile
☐ personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose names are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

SEAL

Signature of Notary Public

ASSIGNMENT

WHEREAS, WE, Bruce Harmon, Michael Butts and Gordon Battaile, hereinafter referred to as "ASSIGNORS", have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: METHOD AND APPARATUS FOR MODELING USING A HARDWARE-SOFTWARE CO-VERIFICATION ENVIRONMENT

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NOW THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for good and valuable consideration, receipt of which is hereby acknowledged, Assignors have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said Assignee, and Assignee's successors and assigns, all right, title and interest in and to said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions, reissues, prolongations or extensions thereof, said interest to be held and enjoyed by said Assignee as fully and exclusively as it would have been held and enjoyed by said Assignors had this assignment and transfer not been made, to the full end and term of any Letters Patent.

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<u>Bruce Harmon</u> Bruce Harmon	<u>11/20/00</u> Date
_____ Michael Butts	_____ Date
_____ Gordon Battaile	_____ Date
_____ Kevin Heilman	_____ Date
_____ Levent Caglar	_____ Date
_____ Raju Marchala	_____ Date
_____ Larry Carner	_____ Date
_____ Kamal Varma	_____ Date

STATE OF _____

COUNTY OF _____

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WITNESS my hand and official seal.

SEAL

Signature of Notary Public

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IN TESTIMONY WHEREOF, Assignors have hereunto signed their names to this assignment on the dates indicated below.

Bruce Harmon
Michael Butts
Gordon Battaile
Kevin C. Heilman
Kevin Heilman

Date
12/11/2000

Date
12-11-00

Date
12-11-00

Date

Levent Caglar

Raju Marchala
Larry B. Carner
Larry Carner
Kamath Varma
Kamal Varma

Date

Date
12-11-00

Date
12/11/00

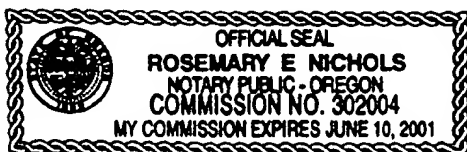
Date

STATE OF Oregon
COUNTY OF Washington
On December 11, 2000 before me,

personally appeared Bruce Harmon, Michael Butts, and Gordon Battaile, Kevin C. Heilman, Raju Marchala, Larry B. Carner, Kamal Varma
☒ personally known to me - OR - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose names are subscribed to

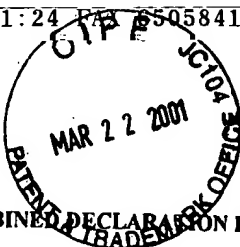
the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



SEAL

Rosemary E. Nichols
Signature of Notary Public



Attorney Docket No.: PATENT
SYNOF-00701

COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY

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My residence, post office address and citizenship are as stated next to my name. I believe I am an original, first and joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled: **METHOD AND APPARATUS FOR MODELING USING A HARDWARE-SOFTWARE CO-VERIFICATION ENVIRONMENT**. The specification of which was filed August 11, 2000 as U.S. Patent Application Number 09/637,984. I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above. I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

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Filing Date

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60/148,822

Application Serial No.

August 13, 1999

Filing Date

I hereby appoint the following as my attorneys with full power of substitution to prosecute this application and transact all business in the Patent and Trademark Office in connection therewith:

Thomas B. Haverstock

32,571

Jonathan O. Owens

37,902

Please direct all correspondence regarding this application to the following:

Thomas B. Haverstock
HAVERSTOCK & OWENS LLP
260 Sheridan Avenue, Suite 420
Palo Alto, California 94306

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of First Joint Inventor: Bruce Harmon

Inventor's Signature: _____

Date

Residence: 12161 NW Welsh Drive, Portland, OR 97229

Citizenship: United States

Post Office Address: 12161 NW Welsh Drive, Portland, OR 97229

Full Name of Second Joint Inventor: Michael Butts

Inventor's Signature: Michael Butts

Date

Residence: 2734 NE 49th Avenue, Portland, OR 97213

Citizenship: United States

Post Office Address: 2734 NE 49th Avenue, Portland, OR 97213

RECEIVED

MAR 26 2001

PATENT
Attorney Docket No.: SYN0P-00701Full Name of Third Joint Inventor: Gordon BattaileInventor's Signature: *Gordon Battaile*12-11-00

Date

Residence: 17870 NW Dogwood Ct, Beaverton, OR 97006Citizenship: United StatesPost Office Address: 17870 NW Dogwood Ct, Beaverton, OR 97006Full Name of Fourth Joint Inventor: Kevin HeilmanInventor's Signature: *Kevin C Heilman*12-11-00

Date

Residence: 24041 SW Middleton Road, Sherwood, OR 97140Citizenship: United StatesPost Office Address: 24041 SW Middleton Road, Sherwood, OR 97140Full Name of Fifth Joint Inventor: Levent Caglar

Inventor's Signature: _____

Date

Residence: 1221 Brahms Terrace, # 205, Fremont, CA 94538Citizenship: United StatesPost Office Address: 1221 Brahms Terrace, # 205, Fremont, CA 94538Full Name of Sixth Joint Inventor: Raju Marchala

Inventor's Signature: _____

Date

Residence: 555 Bryant Street, PMB 254, Palo Alto, CA 94301Citizenship: United StatesPost Office Address: 555 Bryant Street, PMB 254, Palo Alto, CA 94301Full Name of Seventh Joint Inventor: Larry CarnerInventor's Signature: *Larry Carner*12-11-00

Date

Residence: 185 SW 130th Avenue, Beaverton, OR 97005Citizenship: United StatesPost Office Address: 185 SW 130th Avenue, Beaverton, OR 97005Full Name of Eighth Joint Inventor: Kamal VarmaInventor's Signature: *Kamalkanth Varma*12/11/00

Date

Residence: 4200 NW Oxbridge Drive, Portland, OR 97229Citizenship: United StatesPost Office Address: 4200 NW Oxbridge Drive, Portland, OR 97229

PATENT
Attorney Docket No.: SYNOP-00701Full Name of Third Joint Inventor: Gordon BattaileInventor's Signature: *Gordon Battaile*

12-11-00

Date

Residence: 17870 NW Dogwood Ct, Beaverton, OR 97006Citizenship: United StatesPost Office Address: 17870 NW Dogwood Ct, Beaverton, OR 97006Full Name of Fourth Joint Inventor: Kevin HeilmanInventor's Signature: *Kevin C Heilman*

12-11-00

Date

Residence: 24041 SW Middleton Road, Sherwood, OR 97140Citizenship: United StatesPost Office Address: 24041 SW Middleton Road, Sherwood, OR 97140Full Name of Fifth Joint Inventor: Levent CaglarX Inventor's Signature: *Levent Caglar*

2/22/01

Date

Residence: 1221 Brahms Terrace, # 205, Fremont, CA 94538Citizenship: United States TURKISHPost Office Address: 1221 Brahms Terrace, # 205, Fremont, CA 94538Full Name of Sixth Joint Inventor: Raju Marchala

Inventor's Signature: _____

Date

Residence: 555 Bryant Street, PMB 254, Palo Alto, CA 94301Citizenship: United StatesPost Office Address: 555 Bryant Street, PMB 254, Palo Alto, CA 94301Full Name of Seventh Joint Inventor: Larry CarnerInventor's Signature: *Larry Carner*

12-11-00

Date

Residence: 185 SW 130th Avenue, Beaverton, OR 97005Citizenship: United StatesPost Office Address: 185 SW 130th Avenue, Beaverton, OR 97005Full Name of Eighth Joint Inventor: Kamal VarmaInventor's Signature: *Kamalkanth Varma*

12/11/00

Date

Residence: 4200 NW Oxbridge Drive, Portland, OR 97229Citizenship: United StatesPost Office Address: 4200 NW Oxbridge Drive, Portland, OR 97229



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Full Name of First Joint Inventor: Bruce Harmon

Inventor's Signature: _____

Date

Residence: 12161 NW Welsh Drive, Portland, OR 97229

Citizenship: United States

Post Office Address: 12161 NW Welsh Drive, Portland, OR 97229

Full Name of Second Joint Inventor: Michael Butts

Inventor's Signature: _____

Date

Residence: 2734 NE 49th Avenue, Portland, OR 97213

Citizenship: United States

Post Office Address: 2734 NE 49th Avenue, Portland, OR 97213

Full Name of Third Joint Inventor: Gordon Battaile

Inventor's Signature: _____

Date

Residence: 17870 NW Dogwood Ct, Beaverton, OR 97006

Citizenship: United States

Post Office Address: 17870 NW Dogwood Ct, Beaverton, OR 97006

Full Name of Fourth Joint Inventor: Kevin Heilman

Inventor's Signature: _____

Date

Residence: 24041 SW Middleton Road, Sherwood, OR 97140

Citizenship: United States

Post Office Address: 24041 SW Middleton Road, Sherwood, OR 97140

Full Name of Fifth Joint Inventor: Levent Caglar

Inventor's Signature: _____

Date

Residence: 1221 Brahms Terrace, # 205, Fremont, CA 94538

Citizenship: United States

Post Office Address: 1221 Brahms Terrace, # 205, Fremont, CA 94538

Full Name of Sixth Joint Inventor: Raju Marchala

Inventor's Signature: _____

Date

Residence: 555 Bryant Street, PMB 254, Palo Alto, CA 94301

Citizenship: United States

Post Office Address: 555 Bryant Street, PMB 254, Palo Alto, CA 94301

Full Name of Seventh Joint Inventor: Larry Carner

Inventor's Signature: _____

Date

Residence: 185 SW 130th Avenue, Beaverton, OR 97005

Citizenship: United States

Post Office Address: 185 SW 130th Avenue, Beaverton, OR 97005

Full Name of Eighth Joint Inventor: Kamal Varma

Inventor's Signature: _____

Date

Residence: 4200 NW Oxbridge Drive, Portland, OR 97229

Citizenship: United States

Post Office Address: 4200 NW Oxbridge Drive, Portland, OR 97229